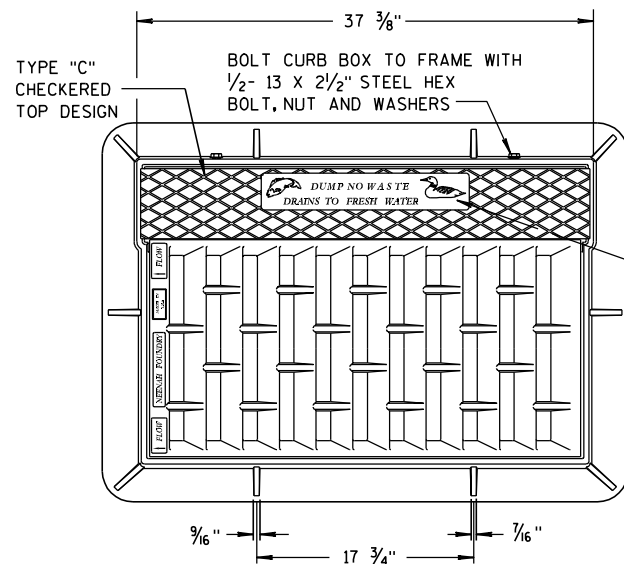
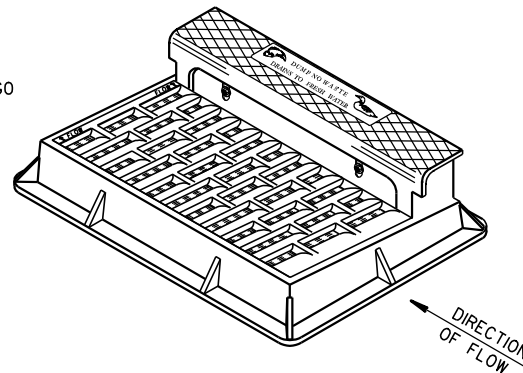




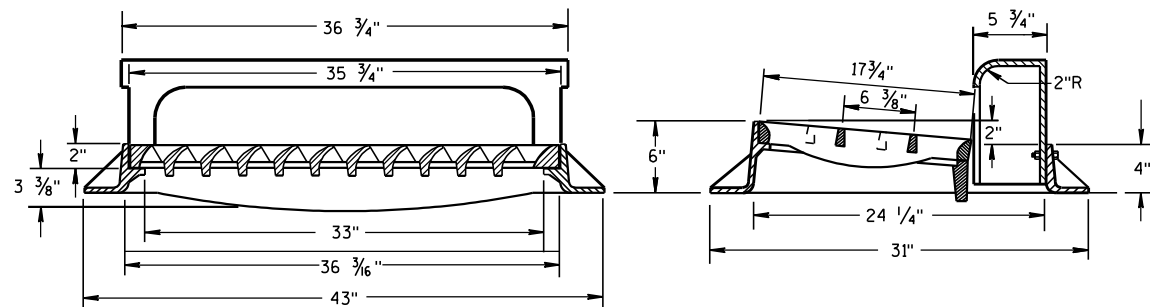
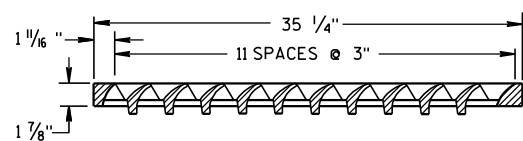
8A5 sheet a: Inlet Covers Type A, H, A-S, & H-S



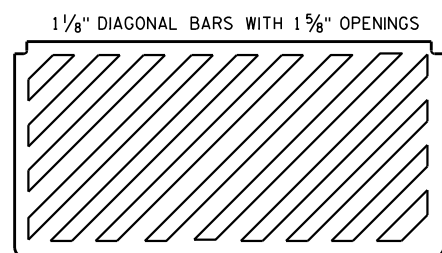
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

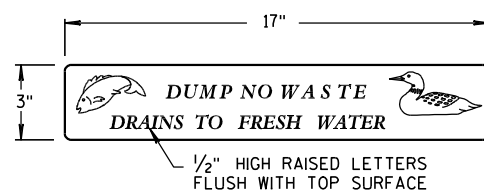


TYPE "H"
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.

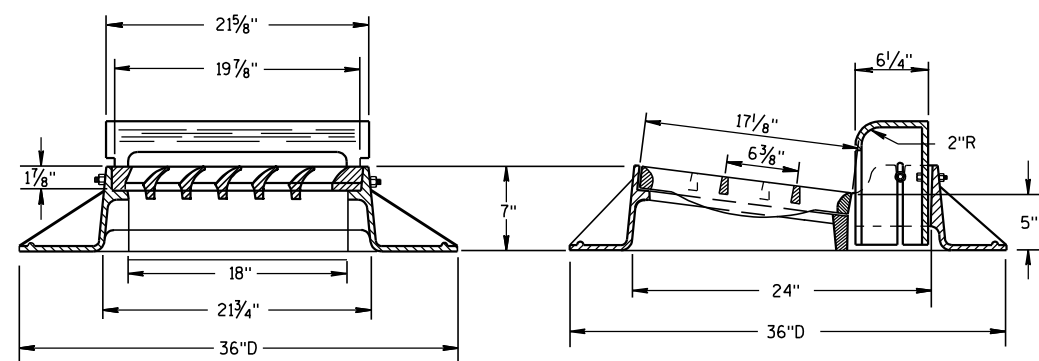
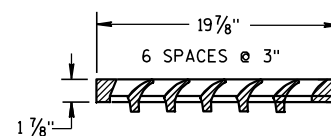
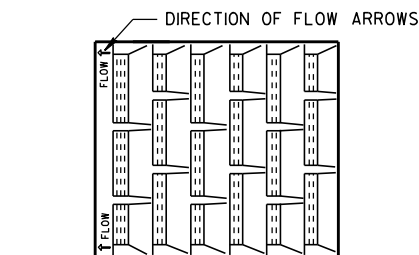


**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 159 LBS.)
GRATE..... 159 LBS.
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



TYPE "A"

(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 185 LBS.
GRATE..... 71 LBS.
CURB BOX..... 84 LBS.

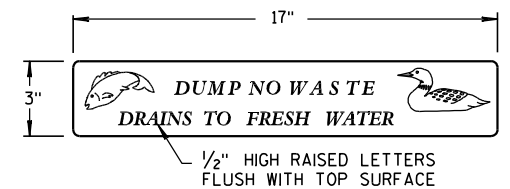
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

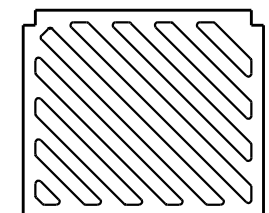
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



LOGO DETAIL

NOTE:
GRATE IS REVERSIBLE.

1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



**SPECIAL GRATE FOR
TYPE "A" COVER**

(MEASURES 19 3/4" X 17" X 1 1/8")
GRATE..... 84 LBS.
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

**INLET COVERS
TYPE A, H, A-S, & H-S**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012

DATE

FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

*Inlet Covers Type A, H, A-S, & H-S***References:**[FDM 13-25-30](#)

Neenah Foundry Company Catalog "Construction Castings"

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
611.0600	Inlet Covers Type A	EACH
611.0603	Inlet Covers Type A-S	EACH
611.0624	Inlet Covers Type H	EACH
611.0639	Inlet Covers Type H-S	EACH

Standardized Special Provisions associated with this drawing:STSP NUMBER TITLE

NONE

Other SDDs associated with this drawing:

NONE

Design Notes:

When special grates are required note as Type H-S or A-S on the drainage table and use the appropriate bid item number.

Inlet covers Type H and H-S are placed on Inlets and Catch Basins 2x3-FT. Type H and H-S covers may also be placed on Inlets 4-FT Diameter, Catch Basins 4-FT, 5-FT and 6-FT Diameter with a flat top 2'x3' opening.

Inlet covers Type A and A-S are placed on inlets 2x2 FT. Type A and A-S covers may also be placed on Inlets 3-FT and 4-FT Diameter and Catch Basins 3-FT, 4-FT, 5-FT and 6-FT Diameter with a flat top 2'x2' opening.

Environmental logo can be changed. This will require a special and/or construction details.

Contact Person:

None



8A5 sheet b: Inlet Covers Type B, B-A, C, MS, MS-A, & WM

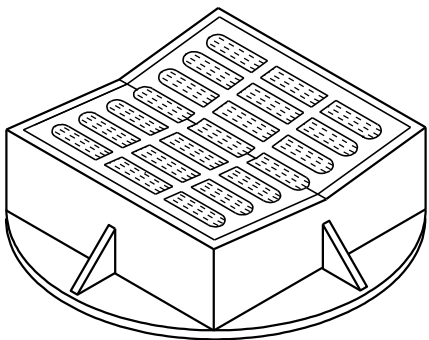
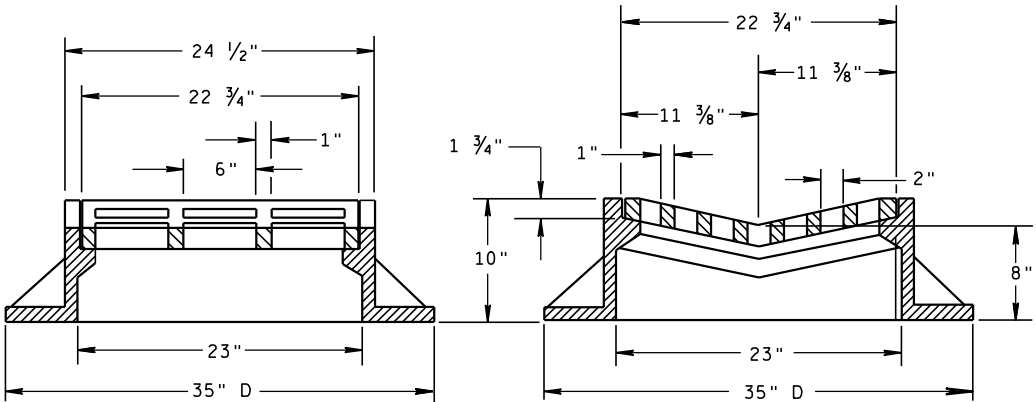
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

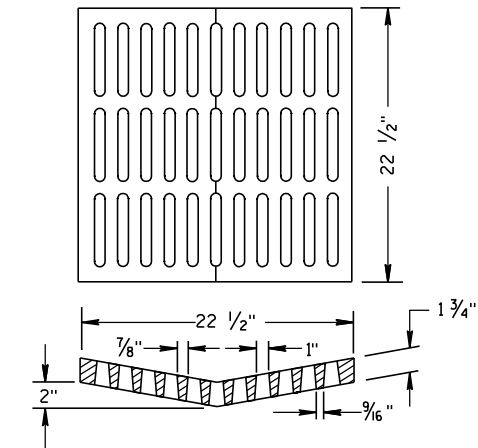
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



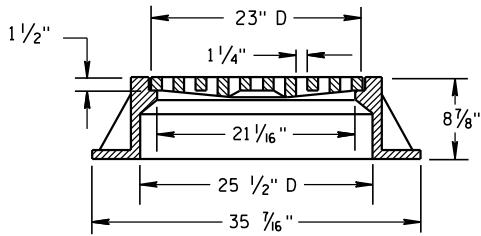
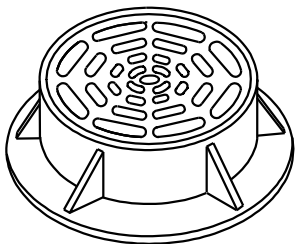
TYPE "B"
(APPROXIMATE WEIGHT 405 LBS.)
FRAME..... 294 LBS.
GRATE..... 111 LBS.



ALTERNATIVE GRATE FOR TYPE "B" COVER

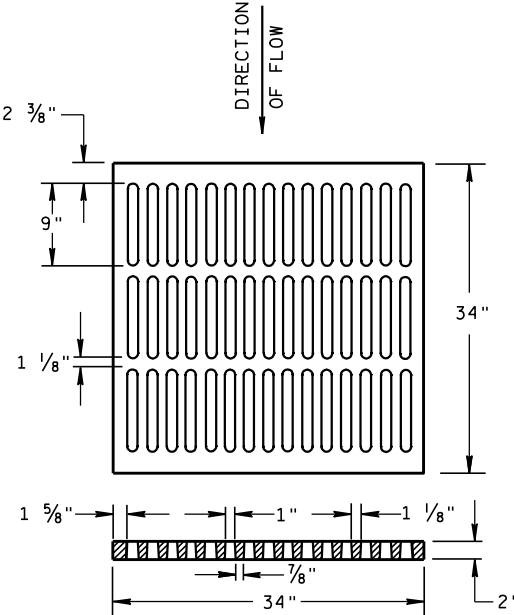
(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



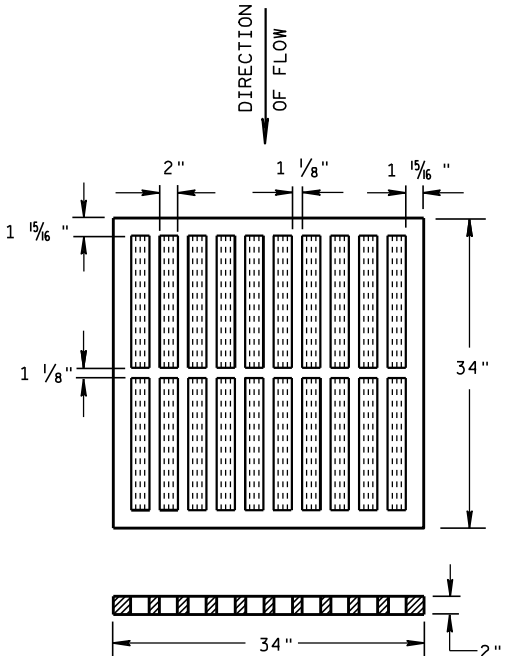
TYPE "C"
(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.



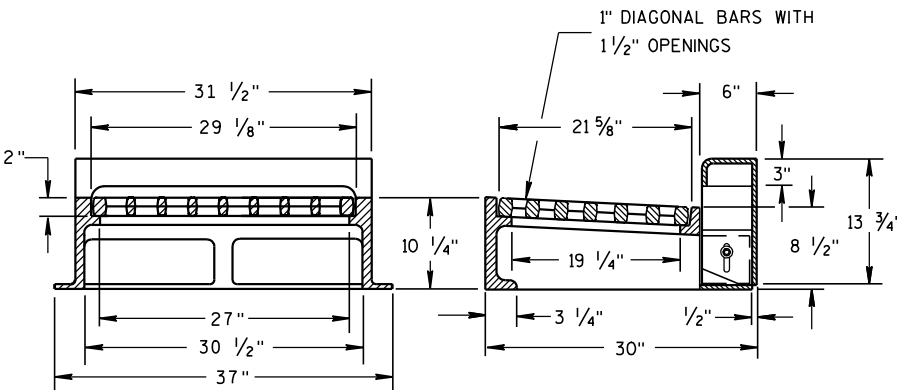
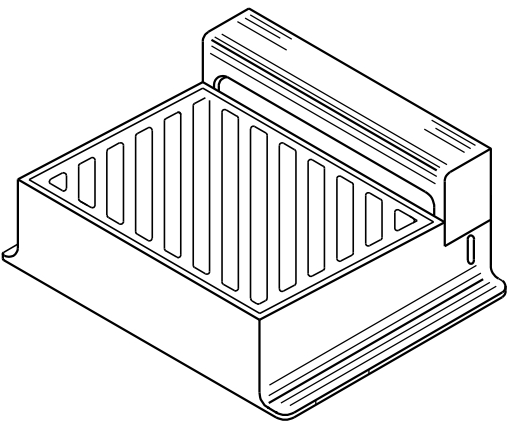
ALTERNATIVE TYPE "MS"
(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"
(APPROXIMATE GRATE WEIGHT 268 LBS.)

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"
(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE /S/ Jerry H. Zogg
FHWA ROADWAY STANDARDS DEVELOPMENT ENGINEER

*Inlet Covers Type B, B-A, C, MS, MS-A, & WM***References:**[FDM 13-25-30](#)

Neenah Foundry Company Catalog "Construction Castings"

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
611.0606	Inlet Covers Type B	EACH
611.0609	Inlet Covers Type B-A.....	EACH
611.0612	Inlet Covers Type C	EACH
611.0642	Inlet Covers Type MS	EACH
611.0645	Inlet Covers Type MS-A.....	EACH
611.0660	Inlet Covers Type WM	EACH

Standardized Special Provisions associated with this drawing:

NONE

Other SDDs associated with this drawing:

NONE

Design Notes:

When alternative grates are required, note a Type B-A or MS-A and use the appropriate bid item number.

Inlet Covers Type B and B-A are placed on Inlets 2x2-FT. Type B and B-A covers may also be placed on Inlets 3-FT and 4-FT Diameter and Catch Basins 3-FT, 4-FT, 5-FT and 6-FT Diameter with a flat top 2x2-FT opening.

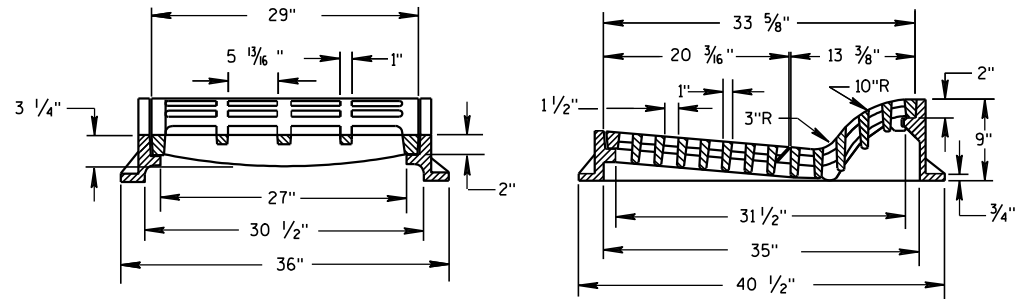
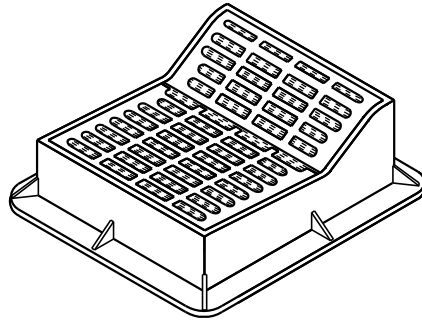
Inlet Covers Type C are placed on circular inlets, circular catch basins, and square or circular manholes with a 2' diameter opening size.

Inlet Covers Type MS and MS-A are to be placed on Inlet Median 1, 2, 3, or 4 Grates.

Inlet Covers Type WM is placed on Inlets and Catch Basins 2x2.5-FT. Type WM Covers may also be placed on Inlets 4-FT Diameter and Catch Basins 4-FT, 5-FT and 6-FT Diameter with a flat top 2x2.5-FT opening.

Contact Person:

Noner



TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.

GRATE.....160 LBS.

GRATE.....182 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

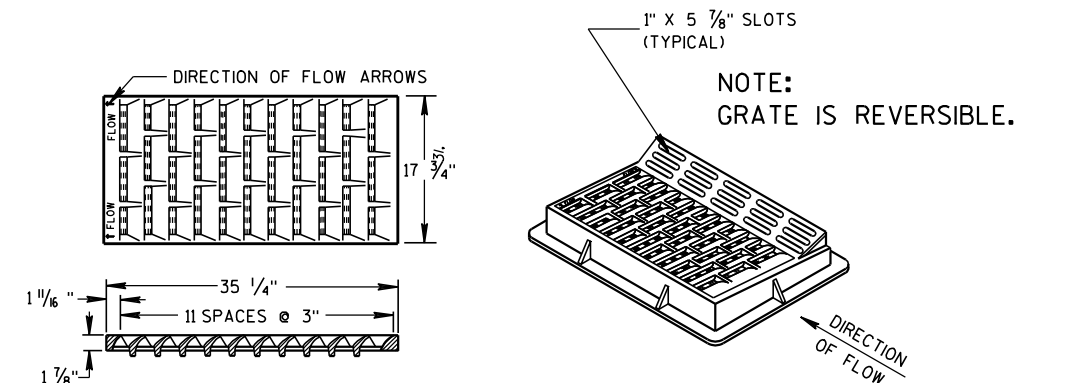
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)

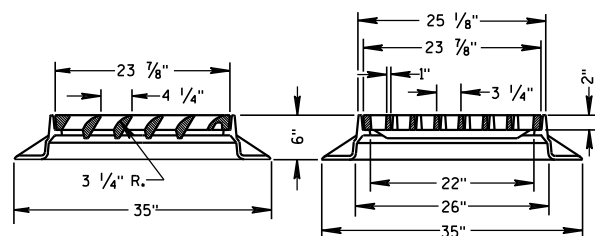
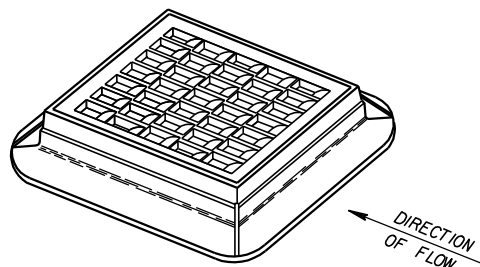
FRAME.....181 LBS.

GRATE.....159 LBS.

CURB BOX.....74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

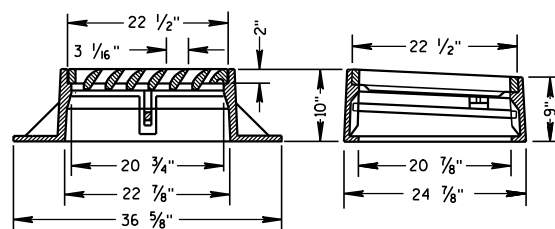
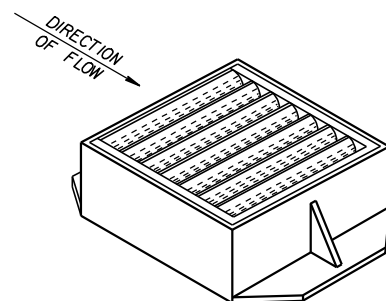


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.

GRATE.....169 LBS.



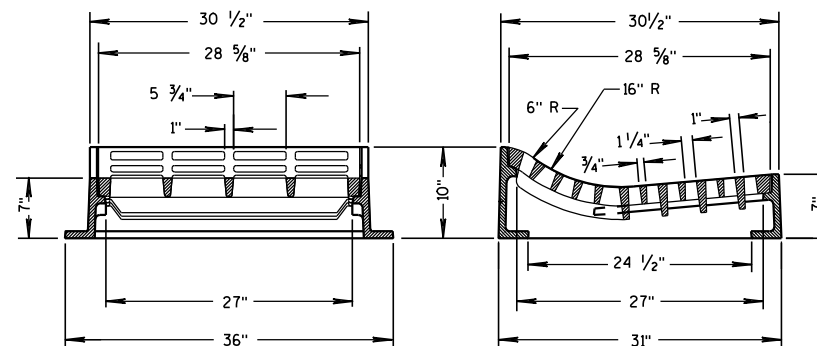
TYPE "V"

(APPROXIMATE WEIGHT 410 LBS.)

FRAME.....269 LBS.

GRATE.....136 LBS.

SAFETY BAR.....5 LBS.



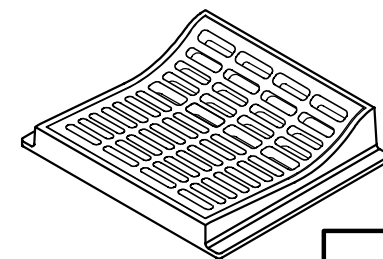
TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)

FRAME.....270 LBS.

GRATE.....260 LBS.

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

*Inlet Covers Type F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S***References:**[FDM 11-20-1](#)[FDM 11-45-10](#)[FDM 13-25-15](#)[FDM 13-25-30](#)

Neenah Foundry Company Catalog "Construction Castings"

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
611.0615	Inlet Covers Type F.....	EACH
611.0627	Inlet Covers Type HM	EACH
611.0630	Inlet Covers Type HM-GJ	EACH
611.0633	Inlet Covers Type HM-GJ-S.....	EACH
611.0636	Inlet Covers Type HM-S.....	EACH
611.0654	Inlet Covers Type V	EACH
611.0651	Inlet Covers Type S	EACH
611.0652	Inlet Covers Type T.....	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

Other SDDs associated with this drawing:

NONE

Design Notes:

When special grate is required for Type HM cover, note the inlet as HM-S.

When special grate is required for Type HM-GJ cover, note the inlet as HM-GJ-S. Note alternative curb box for Type HM cover, note the inlet as Type HM-GJ.

Inlet cover Type F is placed on Inlets and Catch Basins 2.5x3-FT. Type F covers may also be placed on Inlets 4-FT Diameter and Catch Basins 4-FT, 5-FT and 6-FT Diameter with a flat top 2.5x3-FT opening.

Inlet Covers Type HM, HM-S, HM-GJ and HM-GJ-S are placed on Inlets and Catch Basins 2x3-FT. Type HM, HM-S, HM-GJ and HM-GJ-S covers may also be placed on Inlets 4-FT Diameter, Catch Basins 4-FT, 5-FT and 6-FT Diameter with a flat top 2x3-FT opening.

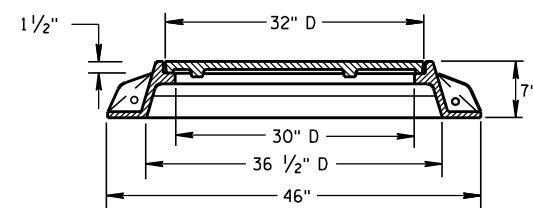
Inlet Cover Type S is placed on Inlets 2x2-FT or 2x2.5-FT. Inlet Cover Type S may also be placed on Inlets 3-FT and Catch Basin 3-FT Diameter with a flat top 2x2-FT opening or Inlets 4-FT Diameter and Catch Basins 4-FT, 5-FT and 6-FT Diameter with a flat top 2x2-FT or 2x2.5-FT opening.

Inlet Cover Type T is placed on Inlets 2x2.5-FT. Inlet Cover Type T may also be placed on Inlets 4-FT Diameter and Catch Basin 4-FT, 5-FT and 6-FT Diameter with a flat top 2x2.5-FT opening. Type T covers are used on Type R and T curb and gutter.

Inlet Cover Type V can be placed on Inlets 2x2-FT or 2x2.5-FT. However, Type V have unique dimensions that don't fit these inlets well. Consider using Inlet 3-FT or Catch Basin 3-FT to 6-FT with a 24x21-Inch centered opening. A special construction detail will be required.

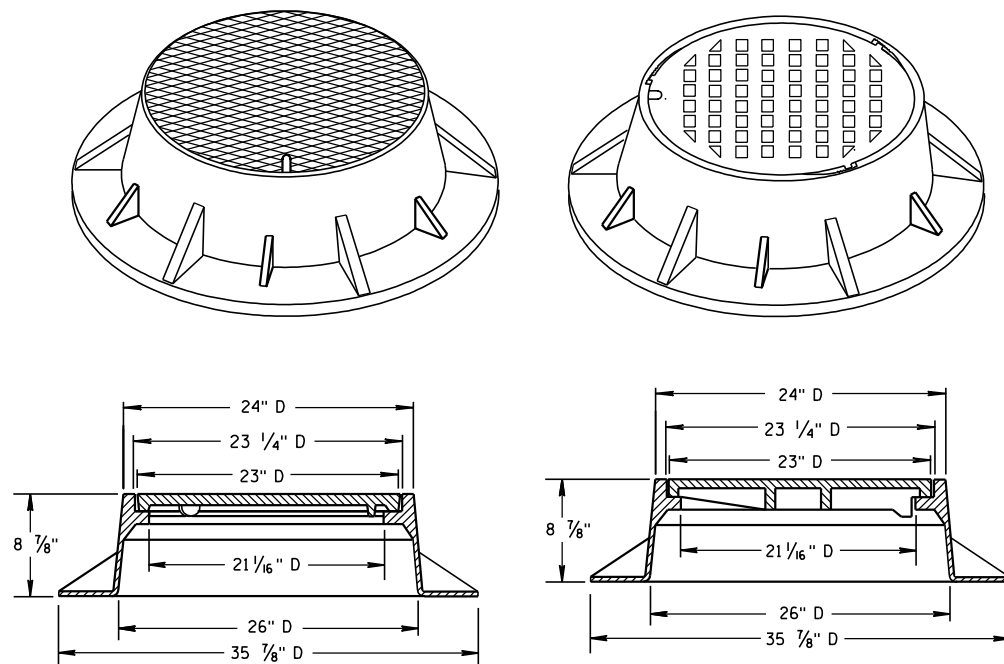
Contact Person:

None



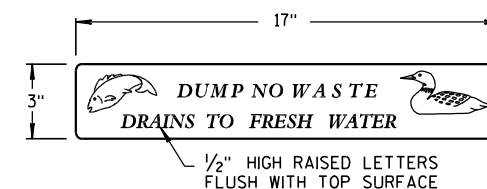
SECTION A-A
TYPE "K"
(APPROXIMATE WEIGHT 439 LBS.)

FRAME.....	216 LBS.
LID.....	223 LBS.

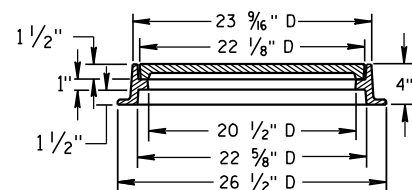
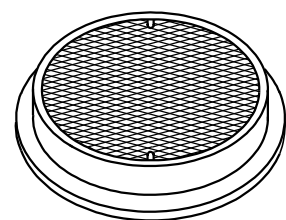
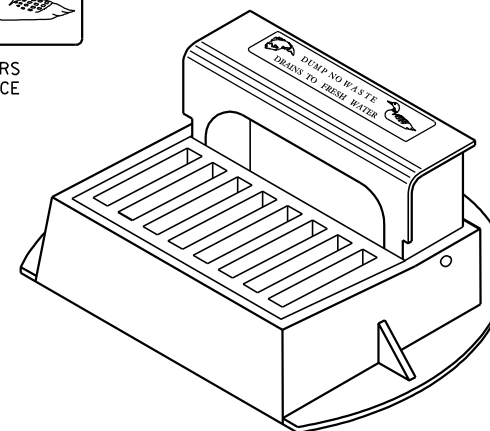


TYPE "J"
(APPROXIMATE WEIGHT 267 LBS.)
FRAME..... 152 LBS.
LID..... 115 LBS.

TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(APPROXIMATE WEIGHT 267 LBS.)
FRAME..... 158 LBS.
LID..... 109 LBS.
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

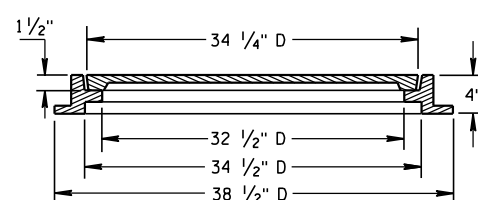
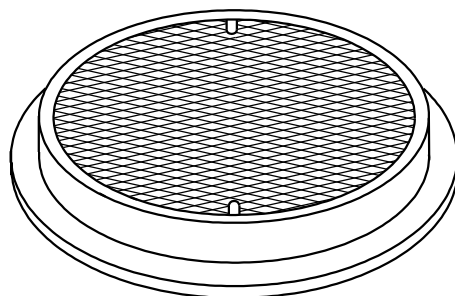


LOGO DETAIL



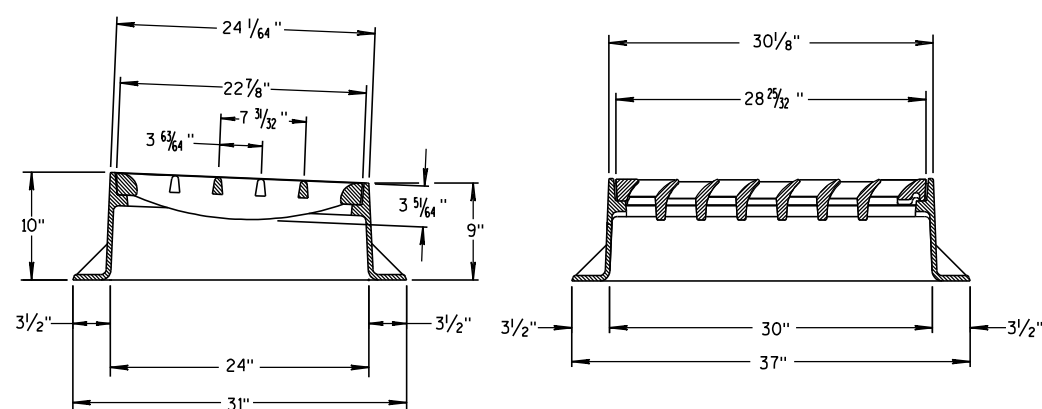
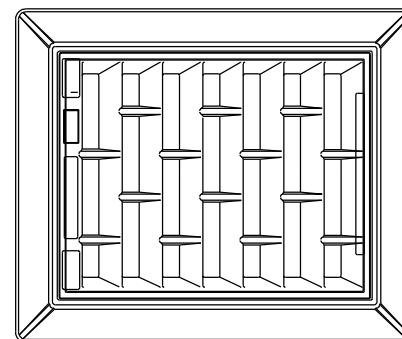
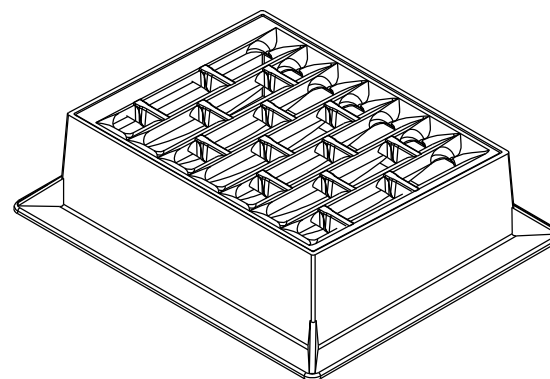
TYPE "L"
(APPROXIMATE WEIGHT 158 LBS.)

FRAME.....	81 LBS.
LID.....	77 LBS.

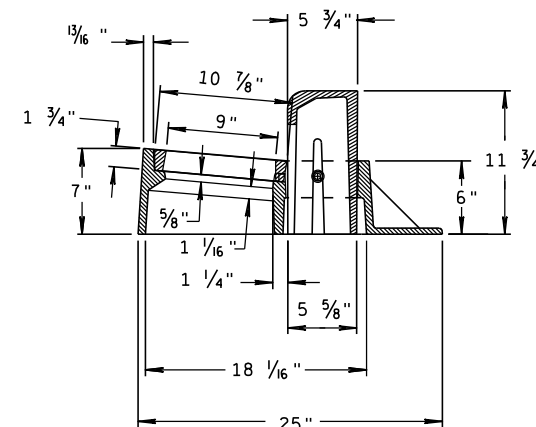


TYPE "M"
(APPROXIMATE WEIGHT 377 LBS.)

FRAME.....	125 LBS.
LID.....	252 LBS.

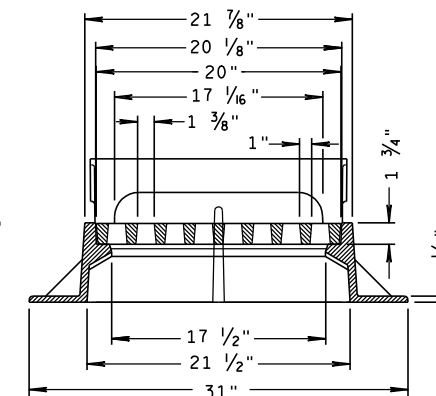


INLET COVER TYPE "BW"



INLET COVER TYPE "Z"
(APPROXIMATE WEIGHT 344 LBS.)

FRAME.....	206 LBS.
GRATE.....	46 LBS.
CURB BOX.....	92 LBS.



INLET COVERS, TYPE BW, Z
MANHOLE COVERS, TYPE
K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

*Inlet Covers Type BW, Z; Manhole Covers Type J, J-S, K, L & M***References:**[FDM 13-25-30](#)

Neenah Foundry Company Catalog "Construction Castings"

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
611.0530	Manhole Covers Type J	EACH
611.0526	Manhole Covers Type J Hinged.....	EACH
611.0535	Manhole Covers Type J-Special	EACH
611.0528	Manhole Covers Type J Hinged-Special	EACH
611.0540	Manhole Covers Type K	EACH
611.0545	Manhole Covers Type L	EACH
611.0550	Manhole Covers Type M.....	EACH
611.0610	Inlet Covers Type BW	EACH
611.0666	Inlet Covers Type Z.....	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

Other SDDs associated with this drawing:

NONE

Design Notes:

Manhole Covers Type J and J-Special are placed on manholes with flat top 2-FT diameter openings.

Manhole Cover Type K is placed on manholes with a flat top 3-FT diameter opening.

Manhole Cover Type L is placed on manholes with a flat top 2-FT diameter opening.

Manhole Cover Type M is placed on manholes with a flat top 3-FT diameter opening.

Inlet Cover Type BW is placed on Inlets 2x2.4-FT. Type BW covers may also be placed on Inlets 4-FT Diameter, Catch Basins 4-FT, 5-FT and 6-FT Diameter with a flat top 2x2.5-FT opening. These inlets were designed to be used in front of barrier walls.

Inlet Cover Type Z is placed on Inlets 3-FT and 4-FT Diameter, Catch Basins 3-FT, 4-FT, 5-FT and 6-FT Diameter with a flat top 2-FT diameter opening.

Environmental logo can be changed. This will require a special and/or construction details.

Contact Person:

None